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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Cliver et al.

Serial Number: 09/756,956

Filed: January 9, 2001

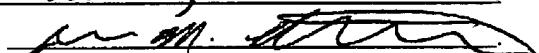
For: **PROCESS FOR PATTERNING TEXTILE MATERIALS,
AND FABRICS MADE THEREFROM**

Group Art Unit: 1751

Examiner: Preeti Kumar

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

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date: October 24, 2006Signature: Name: James M. Robertson**BRIEF ON APPEAL UNDER 37 CFR § 41.37**

Mail Stop Appeal Brief-Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-14501

Sir:

The following appeal brief is submitted pursuant to the Notice of Appeal filed on April 27, 2006 from the Final Action dated February 10, 2006.

REAL PARTY IN INTEREST

The real party in interest is Milliken & Company, P.O. Box 1926, 920 Milliken Road, Spartanburg, South Carolina 29303 (Assignee).

RELATED APPEALS AND INTERFERENCES

Commonly assigned application Serial No. 10/396,899 filed March 25, 2003 is also on appeal to the Board (the brief has been submitted). That application claims a textile fabric and was divided from the present parent application claiming a process for manufacture of a patterned fabric as a result of a restriction requirement issued by the Examiner. Accordingly, the Patent Office has taken the position that the applications are separately patentable and the patentability of one of the applications should be independent of patentability of the other application. However, in the interest of full disclosure Appellants are hereby advising the Board of the other appeal.

STATUS OF CLAIMS

Claims 1-42 are pending and have been finally rejected.

Claims 43-51 have been cancelled.

Claim 37 has been objected to.

Claims 1-42 are being appealed.

A copy of the current claims is attached hereto as the Claims Appendix.

STATUS OF AMENDMENTS

No amendments were submitted subsequent to final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a process for manufacturing a patterned textile fabric. The claimed process involves applying a water soluble chemical substance (page 6, lines 8-11) designed to physically inhibit wetting is applied to selected regions of the fabric according to a pattern (page 9, lines 4-5). The treated regions are characterized by reduced surface wettability (page 9, lines 21-22). The water soluble chemical is applied prior to the dye application step (FIG. 1 and page 10, lines 4-12). During the dye application step substantially the entire fabric is exposed to aqueous dye liquor such as in a dye bath until untreated regions are saturated while treated regions are less than fully saturated to thereby form a patterned fabric (page 9, line 21 – page 10, line 16).

Independent claim 22 is directed to a process for manufacturing a patterned textile fabric. The claimed process involves applying a chemical

substance adapted to prevent total saturation of underlying fabric to selected regions. (page 6, lines 13-26). The regions treated by the chemical are characterized by reduced wettability relative to untreated regions. Following chemical treatment substantially the entire fabric is put through a dyeing process (Fig. 1). During dyeing, the treated regions are characterized by reduced dye uptake relative to the untreated regions (page 9, line 21 – page 10, line 16).

Independent claim 38 is directed to a process for manufacturing a patterned textile fabric. The claimed process involves applying a water soluble chemical substance (page 6, lines 8-11) designed to inhibit wetting to a fabric in a pattern. Following chemical treatment substantially the entire fabric is put through a dyeing process using an aqueous dye. During dyeing, the treated regions are characterized by reduced dye uptake relative to the untreated regions yielding dissimilar colors (page 9, line 21 – page 10, line 16).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether or not claims 1-9, 14, 16-22, 25-39 and 41-42 are properly rejected under 35 U.S.C. 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Kanzig et al. (WO 99/67459).

2. Whether or not claims 1-42 are properly rejected under 35 U.S.C. 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Thomas et al. (US 4,131,422).

3. Whether or not claims 1, 3-4, 7, 9, 14, 17, 19-20, 22, 30, 31, 33-34, 36-38 and 42 are properly rejected under 35 U.S.C. 103(a) as being obvious over Moore et al. (US 5,984,977).

In the interest of full disclosure, Appellants note that there is an outstanding objection to claim 37. It is Appellants' understanding that the legitimacy of an objection is not appealable to the Board. See, MPEP §706.01. Thus, this matter is not raised as an issue for appeal.

ARGUMENT

A. Claims 1-9, 14, 16-22, 25-39 and 41-42 are not anticipated by or obvious over Kanzig et al. (WO 99/67459).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. (MPEP § 2131). Furthermore, in order to establish a *prima facie* case of obviousness there must be some suggestion or motivation that would lead to the

claimed invention. In addition, all the claim limitations must be taught or suggested by the prior art (MPEP § 2142). Appellants respectfully submit that Kanzig et al. does not satisfy these standards with regard to the claims as now presented.

As best understood, Kanzig describes a discharge printing method for hydrophobic fiber materials utilizing a discharge agent which is gentler to fabrics than previous alkaline discharge agents. Applicants respectfully submit that the instant claims delineate the process of achieving a patterned effect using inhibition of wetting which prevents the treated region of the fabric from becoming fully saturated while exposing substantially the entire fabric to the dye. In contrast, as best understood Kanzig specifically relies on increased wettability in any treated areas to achieve variable dyeing. This understanding is based on the fact that each of the paste formulations used in the examples of Kanzig incorporates ethylene oxide with castor oil. Such constituents are understood to be wetting agents and would have the effect of increasing wettability in a substrate to which they are applied. Such an understanding is consistent with the stated goal of Kanzig to facilitate printing of hydrophobic fiber materials.

If one were to follow the practice advocated by the Office Action of putting a print paste of Kanzig down first and then overdyeing, the wetting agents in the Kanzig print pastes would increase the wettability of the substrate fabric. Of course, this is the exact opposite of the presently claimed invention. Moreover, any elimination of the wetting agents in the Kanzig print pastes would likely change the

performance of the Kanzig pastes and appears to be inconsistent with the basic goal of printing hydrophobic fiber. Accordingly, absent hindsight reconstruction, no reasonable motivation appears to exist for making a modification to reach the present invention.

In the last Office Action the Examiner states that these arguments amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The Examiner then states that "It is not seen how the print pastes of Kanzig et al. are not commensurate in scope with the claimed chemical substance."

In addressing the Office Action's position, it is respectfully submitted that pointing out to the Examiner that Kanzig's print pastes would increase the wettability of the substrate fabric and that this is the exact opposite of the presently claimed invention provides a clear and specific basis for distinguishing the claimed subject matter from the cited reference. Moreover, a reading of the claims clearly indicates that a feature of the process is reduced wettability in the treated regions.

As best understood, the Examiner's statement that "It is not seen how the print pastes of Kanzig et al. are not commensurate in scope with the claimed chemical substance" appears to reflect a failure to give weight to all elements of the claims. Specifically, it appears that the Examiner has given no weight to the fact that the claimed process utilizes a treatment that reduces wettability in the treated regions

while the cited art uses a treatment that is understood to increase wetability in the treated regions.

In addressing these arguments in the last Office Action, the Examiner states as follows:

"Contrary to applicants arguments, the instant claims also put a chemical substance (print paste) down first and then expose substantially the entire fabric to an aqueous dye. Accordingly, the teachings of Kanzig et al. are pertinent to and anticipate the material limitations of the instant claims."

(emphasis added)

With all due respect to the Examiner, the examination approach which appears to be reflected by these statements is inconsistent with the well recognized obligation to consider all elements of the claims. Specifically, it appears that the Examiner has distilled the claimed subject matter down to a small number of limitations which the Examiner considers to be material while giving lesser if any weight to other recited limitations. In particular, it appears that no weight has been given to the fact that the claimed process utilizes a treatment that reduces wetability in the treated regions. To any extent that this approach may have been taken, it is respectfully submitted that the resultant rejection is deficient and cannot be maintained. See, MPEP §2141.02(II) noting that distilling an invention down to the "gist" or "thrust" of the invention disregards the requirement of

analyzing the subject matter as a whole. See also, MPEP §2143.03 noting that all words in a claim must be considered in judging the patentability of that claim against the prior art.

B. Claims 1-42 are not anticipated by or obvious over Thomas et al. (US 4,131,422).

As best understood, Thomas teaches the application of a water soluble acid dyeable polymer in a pre-determined pattern followed by application of a dye which preferentially dyes the polymer coated portion of the fabric. The acid dyeable polymer contains cationic sites. The dyes employed are anionic dyes. Clearly, this is an ion-exchange mechanism (Col. 2, lines 27-33). Instead of retarding dyeing by inhibition of wetting, it appears that Thomas discloses application of a polymer which enhances dyeing of the areas to which the polymer has been applied. Applicants respectfully submit that this cited art in no way anticipates or renders obvious a process utilizing a chemical agent which physically lessens wetting of the fabric and thereby affects saturation of the fabric by dyes. To the contrary, it appears to teach against such a process.

In addressing these arguments in the last Office Action, the Examiner states as follows:

"Contrary to applicants arguments, the instant claims also apply a chemical substance in a pattern and then expose

substantially the entire fabric to an aqueous dye. Accordingly, the teachings of Thomas et al. are pertinent to and anticipate the material limitations of the instant claims."
(emphasis added)

As previously noted, the examination approach which appears to be reflected by these statements is inconsistent with the well recognized obligation to consider all elements of the claims. Specifically, it appears that the Examiner has distilled the claimed subject matter down to limitations which the Examiner considers to be material while giving no weight to other recited limitations. In particular, it appears that no weight has been given to the fact that the claimed process utilizes a treatment that reduces wettability in the treated regions. To any extent that this approach may have been taken, it is respectfully submitted that the resultant rejection is deficient and cannot be maintained. See, MPEP §2141.02(ii) noting that distilling an invention down to the "gist" or "thrust" of the invention disregards the requirement of analyzing the subject matter as a whole. See also, MPEP §2143.03 noting that all words in a claim must be considered in judging the patentability of that claim against the prior art.

C. Claims 1, 3-4, 7, 9, 14, 17, 19-20, 22, 30, 31, 33-34, 36-38 and 42 are not obvious over Moore et al. (US 5,984,977).

As best understood, Moore discloses a dye blocking print paste and a dye enhancing print paste used to selectively decrease or increase the shade of dyed portions of a cellulose article (Abstract). As regards the rejection of claim 1 and claims depending therefrom, Appellants respectfully submit that Moore involves chemically blocking dye sites during a discontinuous dye process. The dye blocking agent preferably comprises a pre-catalyzed glyoxal resin and a dye resist which is preferably polyacrylic acid (Col. 3, lines 13-18). Both components are required in order to effectively block the dye (Table 3). Furthermore, the fact that the dye blocking paste includes a wetting agent (Col. 2, line 66) would argue against a mechanism in which the dye blocking paste was physically inhibiting wetting of the fabric as required by Claim 1.

As regards independent claims 22 and 38 and the claims depending therefrom, each of those claims (as well as claim 1 and the claims depending therefrom) specifically requires reduced wettability in the treated regions. Conversely, as best understood, Moore specifically advocates the use of a wetting agent in the dye blocking print paste (Col. 2, line 66). While Moore may result in reduced shading in treated areas, that reduction does not appear to correspond with a reduction in wettability of the fabric as presently claimed. Rather, it appears to be the result of interaction between the dye resist and the dye. Thus, as best understood, the mechanism used in Moore is substantially different from the mechanism as set forth in the instant claims.

Contrary to the position taken by the Office Action, it is respectfully submitted that by advocating the use of wetting agents in combination with a chemical dye resist, Moore is most properly viewed as teaching against a process that uses reduced wettability to reduce dye take-up as presently claimed. Accordingly, it is respectfully submitted that any outstanding obviousness rejection based on Moore should be withdrawn.

Conclusion

For the above reasons, Appellants respectfully request the Appeal Board to reverse the decision of the Examiner.

Extension / Authorization to Charge Deposit Account

A request/petition for a four (4) month extension accompanies this submission. In the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for any additional time required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from our Deposit Account No. 50-1424.

In the event that there are additional fees associated with the submission of these papers, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 50-1424.

Respectfully Submitted,



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Claims Appendix

1. A process for manufacturing patterned fabrics comprising the steps of:
applying a water soluble chemical substance designed to physically inhibit wetting to selected regions of a fabric to define treated and untreated regions forming a pattern, wherein the treated regions to which the chemical substance is applied are characterized by reduced wettability relative to the untreated regions; and
exposing substantially the entire fabric to an aqueous dye liquor until said untreated regions are saturated while said treated regions are less than fully saturated, to thereby form a patterned fabric.
2. The process according to Claim 1, wherein said chemical substance comprises a substance selected from the group consisting of alginate print pastes, synthetic print pastes, fluorochemicals and combinations thereof.
3. The process according to Claim 1, wherein said chemical substance comprises a print paste.
4. The process according to Claim 3, wherein said chemical substance consists essentially of a print paste.

5. The process according to Claim 1, wherein said chemical substance comprises a fluorocarbon.
6. The process according to Claim 1, wherein said chemical substance comprises a fluorocarbon and a print paste.
7. The process according to Claim 1, wherein said chemical substance further comprises a dye.
8. The process according to Claim 1, wherein said chemical substance comprises an optical brightener.
9. The process according to Claim 1, wherein said chemical substance comprises a dye and a print paste.
10. The process according to Claim 1, wherein said step of exposing substantially the entire fabric to an aqueous dye liquor is performed by a continuous or semi-continuous dye process.
11. The process according to Claim 1, wherein said step of exposing substantially the entire fabric to an aqueous dye liquor is performed by a process selected from the group consisting of thermosol dye processes, pad/steam

processes, thermosol/pad/steam processes, cold pad batch dyeing, jig dye processes, and combinations thereof.

12. The process according to Claim 11, wherein said step of continuously exposing substantially the entire fabric to an aqueous dye liquor is performed using a thermosol dye process.

13. The process according to Claim 11, wherein said step of continuously exposing substantially the entire fabric to an aqueous dye liquor is performed using a pad/steam process.

14. The process according to Claim 1, wherein said fabric comprises fibers selected from the group consisting of polyester, cotton, PLA, PTT, nylon, rayon, and blends thereof.

15. The process according to Claim 1, wherein said fabric comprises polyester, and the step of exposing substantially the entire fabric to an aqueous dye liquor is performed using a thermosol or pad/steam dye process.

16. The process according to Claim 1, wherein said step of exposing substantially the entire fabric to an aqueous dye liquor comprises dyeing the fabric with a dyestuff selected from the group consisting of disperse dyes, reactive dyes, direct dyes, vat dyes, acid dyes, and sulfur dyes.

17. The fabric made according to the process of Claim 1.
18. The process according to Claim 1, wherein said step of applying a chemical substrate is performed by a method selected from the group consisting of flexographic printing, gravure roll application, roller bed printing, roller screen printing, flick brush, ultrasonic spray, multiple nozzle injection patterning, and print head pattern methods.
19. The process according to Claim 1, wherein said step of applying the chemical substance defines a first pattern, and further comprising the step of applying a second chemical substance in a second pattern which is different from the first pattern, to thereby form a multi-colored fabric.
20. The process according to Claim 19, wherein at least one of said first and second chemical substances comprises a dye.
21. The process according to Claim 1, wherein said fabric comprises at least two types of fibers, and said step of dyeing the fabric comprises dyeing less than all of said at least two types of fibers, to thereby form a heather fabric.
22. A process for manufacturing patterned fabrics from a dye process comprising the steps of:

applying a chemical substance to selected regions of a fabric, said chemical substance being adapted to prevent total saturation of underlying fabric regions to which it is applied, wherein treated regions to which the chemical substance is applied are characterized by reduced wettability relative to untreated regions; and

dyeing substantially the entire fabric, to thereby produce a patterned fabric wherein the treated regions are characterized by reduced dye uptake relative to the untreated regions.

23. The process according to Claim 22, wherein said step of dyeing is performed by a continuous or semi-continuous dye process.

24. The process according to Claim 22, wherein said step of dyeing is performed by a process selected from the group consisting of thermosol dye processes, pad/steam processes, thermosol/pad/steam processes, cold pad batch dyeing, jig dye processes, and combinations thereof.

25. The process according to Claim 22, wherein said step of dyeing comprises exposing the entire piece of fabric to at least one dye bath.

26. The process according to Claim 22, wherein said chemical substance comprises a substance selected from the group consisting of alginate print pastes, synthetic print pastes, fluoroochemicals, and combinations thereof.

27. The process according to Claim 25, wherein said chemical substance consists essentially of a print paste.
28. The process according to Claim 22, wherein said chemical substance consists essentially of a fluorocarbon.
29. The process according to Claim 22, wherein said chemical substance further comprises a fluorocarbon and a print paste.
30. The process according to Claim 22, wherein said chemical substance further comprises a dye.
31. The process according to Claim 22, wherein said fabric comprises fibers selected from the group consisting of polyester, cotton, PLA, PTT, nylon, rayon, and blends thereof.
32. The process according to Claim 22, wherein said step of applying a chemical substrate is performed by a method selected from the group consisting of flexographic printing, gravure roll application, roller bed printing, roller screen printing, foam application, flick brush, ultrasonic spray, multiple nozzle injection patterning, and print head pattern methods.

33. The process according to Claim 22, wherein said step of applying the chemical substance defines a first pattern, and further comprising the step of applying a second chemical substance in a second pattern which is different from the first pattern, to thereby form a multi-colored fabric.
34. The process according to Claim 33, wherein at least one of said first and second chemical substances comprises a dye.
35. The process according to Claim 22, wherein said fabric comprises at least two types of fibers, and said step of dyeing the fabric comprises dyeing less than all of said at least two types of fibers, to thereby form a heather fabric.
36. A fabric made according to the process of Claim 22.
37. A fabric according to Claim 22, wherein the fabric defines a pattern of yarns forming the fabric, and the pattern formed by the steps of applying a chemical substance and dyeing the fabric mimics the pattern of the yarns forming the fabric.
38. A process for manufacturing patterned fabrics comprising the steps of: applying a water soluble chemical substance designed to inhibit wetting to a fabric to define treated and untreated fabric regions wherein treated regions to

which the chemical substance is applied are characterized by reduced wettability relative to untreated regions; and

exposing substantially said entire fabric to an aqueous dye, such that said treated regions are wet by said aqueous dye to a lesser extent than said untreated regions, thereby forming a pattern of relatively dissimilar colors as a result of their relative differences in uptake of the aqueous dye.

39. The process according to Claim 38, wherein said chemical substance comprises a substance selected from the group consisting of alginate print pastes, synthetic print pastes, fluoroochemicals, and combinations thereof.

40. The process according to Claim 38, wherein said step of exposing the fabric to a dye comprises dyeing the fabric by a continuous or semi-continuous dye process.

41. The process according to Claim 38, wherein said water soluble chemical substance includes a dye, to thereby dye the treated fabric regions a different color from the aqueous dye.

42. A fabric made by the process of Claim 38.

43 – 51. (Cancelled)

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None